

# ***Headquarters Air Mobility Command***

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## **Patient Isolation Unit Update for CCM**

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***HQ AMC/A58F***

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# Pod Update

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## ■ Overview:

- Background
- Current Status/Photo
- Way Ahead



# Background

- **New initiative identified in AMC Master Plan and '03 CRRA**
- **No equipment in AE inventory to move larger numbers of biologically contagious patients**
- **AFDD 2-1.8 states combatant commander may direct movement of contaminated casualties**
  - **Does not directly address biologically contaminated patients**
  - **Movement of BW patients addressed in other manuals**



# Background Continued

- Currently no COTS/GOTS products available to fully meet requirements
- Very limited supply of Vickers units
- CRADA for development of Pod signed by USAMRIID and Alion Science
  - USTRANSCOM and AMC partnering with CRADA



# Current Status

- Validated by SGROC
- AMC continuing to assess COTS items & seeking funding from USTC to begin testing early
  - AMC “must pay” FY 06-11

## Ongoing meeting with Alion Science

- Engineering Prototype completed & under review
- PACAF seeking WRAP funding
- 311<sup>th</sup> HSW awarded Congressional plus-up



# Initial Alionscience Prototype



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# Completed Engineering Prototype

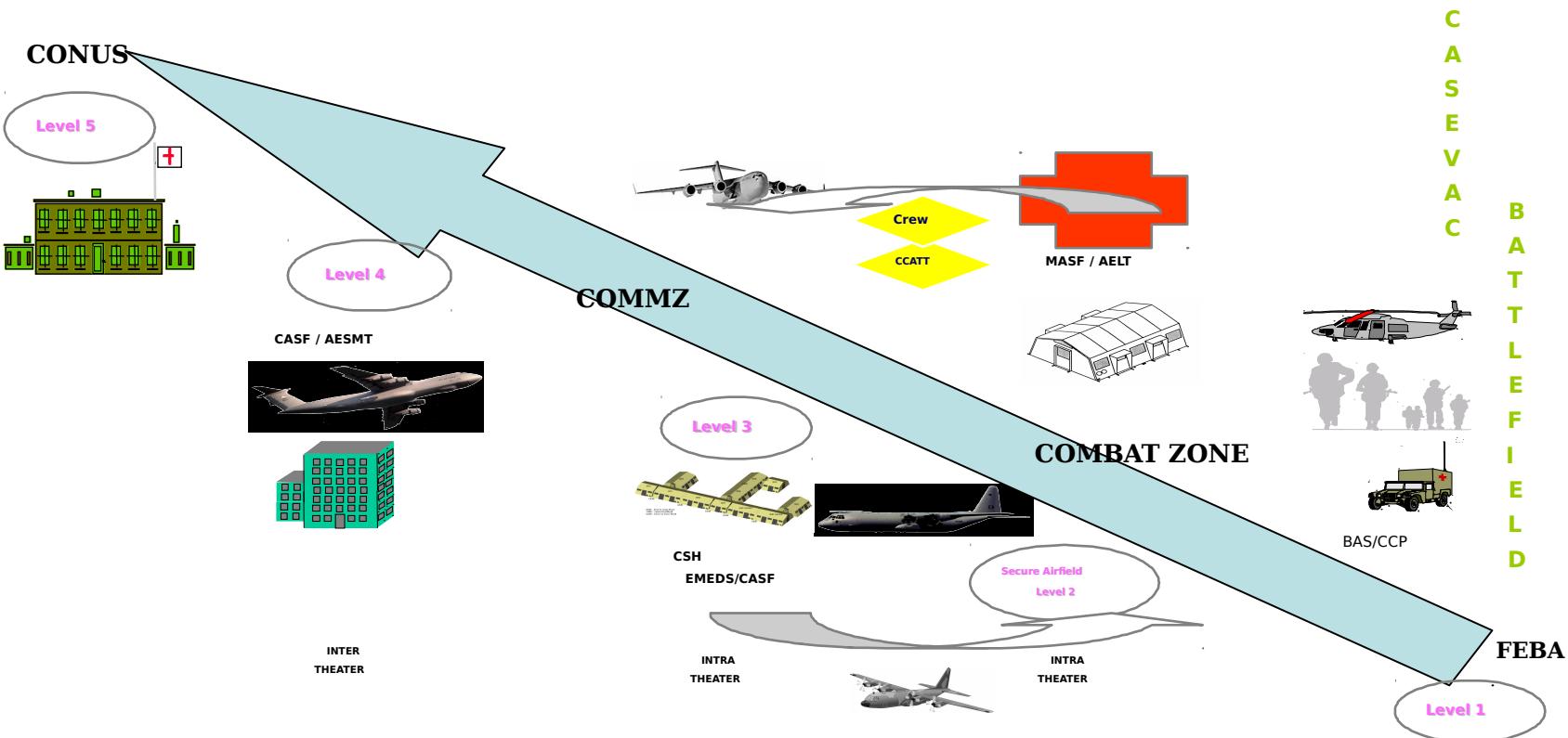


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# AF CCM AE Capability

# HIGH LEVEL OPERATIONAL CONCEPT GRAPHIC





# Potential KPPs

- FDA/FAA approval
- Capability to decontaminate any non-disposable elements
- Air-exchange capable
- Protection against external CW/BW agents for patient, & protection of air/medical crew against patient-borne contaminants
- Medical access to the patient
- Airworthiness certification
- Sized to fit on and within a NATO litter
- Man-portability



# AE Requirements

- **Amount Requested:** 20
- **Disposable and/or easy to decontaminate**
- **Have negative flow option/filters**
- **Exchange Port Capability**
- **Air Worthiness Certified**
- **Compatible with Aircraft Power**
  - **Required:** 110 VAC/60-400 Hz
  - **Desired:** 110-220 VAC/60-400 Hz
  - **Max Amps:** no more than 2 amps
- **Fits standard NATO litter**



# AE Requirements

- **Weighs no more than 50 pounds**
- **Disposable accessory equipment hook-ups (i.e. BP cuff, red dot leads, pulse oximetry probe, etc.) with ports for access**
- **Low voltage white lighting unit and red lighting unit to visualize patient in low/no light conditions**
- **General and Human Waste exchange feature (want waste to be double bagged)**
- **Environmental Features (i.e. some type of cooling and/or de-fogging device)**



# AE Requirements

- **Battery unit for transport (should fit into standard ambulance)**
- **At Least five sets of treatment ports (one at head, two on each side and potentially one at the feet)**
- **Needless IV system to administer meds and fluids**
- **Able to utilize: Ventilator, IV Pump(s), Cardiac Monitor, Pulse Oximetry, and non-invasive and invasive blood pressure monitoring**



**Unclassified  
MAF - Patient Isolation Unit**

**BACKGROUND:**

(U) New initiative to determine if capability can be designed to transport patients ill with Critical List infections

(U) Only Critical List BW agents present threat to Air Mobility (smallpox, Ebola/Marburg, CCHF, & pneumonic plague)

**ADJUSTMENT:**

(U) Provide RDT&E, procurement, and O&M funding for airworthiness testing to develop capability to transport biologically contaminated patients.

<b>\$M06R2M149MN</b>	<b>FY04</b>	<b>FY05</b>	<b>FY06</b>	<b>FY07</b>	<b>FY08</b>	<b>FY09</b>	<b>FY10</b>	<b>FY11</b>
CURRENT PRG	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ADJUSTMENT			2.1	1.7	1.4	1.5	0.1	0.1
REV PGM			2.1	1.7	1.4	1.5	0.1	0.1
TOTAL								

<b>PROCUREME</b>	<b>FY04</b>	<b>FY05</b>	<b>FY06</b>	<b>FY07</b>	<b>FY08</b>	<b>FY09</b>	<b>FY10</b>	<b>FY11</b>	<b>MPWR</b>	<b>FY04</b>	<b>FY05</b>	<b>FY06</b>	<b>FY07</b>	<b>FY08</b>	<b>FY09</b>	<b>FY10</b>	<b>FY11</b>
Pt Isolation Un	NT	0	0	0	8	6	6	0	0	OFF	0	0	0	0	0	0	0
									EN	0	0	0	0	0	0	0	0
									L								
									CIV	0	0	0	0	0	0	0	0

**IMPACTS:**

- (U) COCOM: SPG: No CONOPS: No UFR: No I-CRRA: Yes
- (U) REQUIREMENT: RDT&E funding to determine if a biocontainment PM capability can be developed;
- (U) USAF AE Program currently lacks PM biocontainment transport capability
- (U) If not funded, will be unable to transport patients with critical lists agents via AE System
- (U) Partnering with US Army Medical Research Institute for Infectious Diseases (USAMRIID)
- (U) Aircraft DECON requires coordinated efforts of LG/SG/CE & SPO engineering to ensure aircraft usability
- (U) LIMFAC: Diplomatic clearance restrictions/political concerns may impact actual utilization of capability



## MAF - Patient Isolation Unit

**ADJUSTMENT:** (U) Provide RDT&E, procurement, and O&M funding for airworthiness testing to develop capability to transport biologically contaminated patients.

Funding Lines Total		\$2.082	\$1.733	\$1.437	\$1.465	\$0.122	\$0.126
PE	APPN COST PROG OAC	WSC/BPAC	FY2006	FY2007	FY2008	FY2009	FY2010

41133f 3400 00000 af8000 65	000000	0.000	0.000	0.114	0.118	0.122
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0.126

41133f 3600 00000 af8000 65		2.082	0.000	0.000	0.000	0.000
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0.000

41133f 3080 82041 a	FY2004	FY2005	FY2006	FY2007	FY2008	FY2009	FY2010
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FY2011

**Procurement**

Pt Isolation Unit	0	0	0	8	6	6	0
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**Coordination**

Panel Chair:

Program Element Mtr:

Panel POC:

3400 FM Appn Manager

CONOP Champion:

3600 FM Appn Manager

Crosscut Panel:

3080 ILPY Manager

IPT Chief:

XPPE DB Manager:

ANG/AFR:

ZBT Manager:



# Way Ahead

- Continue to re-assess COTS/GOTS items
  - Seek FDA approval and airworthiness certification
- Seek test funding for prototypes
- Continue partnering with Alionscience and USAMRIID
  - Consider evaluating prototype during MUA or field exercise
- Training
- Work with A33E & others to draft CONOPS

# ***Headquarters Air Mobility Command***

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## **QUESTIONS**

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# Contagious Casualty Management AE



- Develop AE Capability to **transport contagious casualties in a deployed environment** - A

